

**METHOD AND APPARATUS FOR CONTROLLING CURRENT
DEMAND IN AN INTEGRATED CIRCUIT**

5

Abstract of the Disclosure

The present invention relates generally methods and apparatus for controlling current demand in an integrated circuit. One embodiment relates to a method that includes detecting if a supply voltage overshoot or a undershoot
10 is present or anticipated, and if detected, controlling current consumed by a power consumption circuitry to ensure that the power supply voltage remains within acceptable levels. Other embodiments relate to an integrated circuit having a capacitive decoupling structure, power consumption circuitry, and power consumption control circuitry for controlling current consumed by at
15 least a portion of the power consumption circuitry. Therefore, embodiments of the invention relate to monitoring and controlling power consumption (i.e. current demand) of a power consumption circuit (such as an integrated circuit) in order to prevent devastating supply voltage undershoots, overshoots, and oscillations.

20